

Negative Life Events and Internalizing Behaviors: The Moderating Role of  
Self-Esteem in Early Adolescence

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Submitted to the Clinical Child Psychology Program and the Faculty of the Graduate  
School of the University of Kansas in partial fulfillment of the requirements for the  
degree of Masters of Arts.

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## **Abstract**

Previous studies have suggested that exposure to frequent negative life events is associated with youth's maladjustment. Early adolescents living in socially disorganized neighborhoods experience frequent stressors such as limited access to resources, lack of safety, and are at increased risk of experiencing negative life events (NLE). Such exposure to NLEs has been linked to externalizing and internalizing behaviors. Although the impact of NLEs can lead to poor psychological outcomes, closely linked self-concept factors such as self-esteem have been suggested to influence the development of internalizing behaviors. Self-esteem influences the individual's response to the environment, and interactions with others with implications for the onset and maintenance of psychological disorders. Using a structural equation modeling approach, self-esteem was examined as a moderator of the relationship between reported negative life events and internalizing behaviors for a sample of 603 adolescents living in socially disorganized neighborhoods. Results indicated that these early adolescents reporting higher levels of self-esteem also reported lower internalizing behaviors. However, contrary to the prediction, self-esteem did not moderate the link between reported negative life events and adolescents' internalizing behaviors.

## Acknowledgments

I would like to thank my family for always being by my side and cheering me on and my committee chair for his continued support and guidance.

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## **Introduction**

Research has consistently shown that exposure to negative life events (NLE) is associated with a range of maladaptive outcomes (Grant et al., 2006). Of those outcomes, internalizing problems remain the most widely studied consequences of NLEs. NLEs in childhood and adolescence, such as loss of a parent or a friend or parental divorce, have contributed to psychopathology, which can continue into adulthood (Kessler, Davis, & Kendler, 1997; Kessler et al., 2010). Longitudinal and cross sectional studies have frequently found an association between cumulative effects of NLEs suggesting a dose response relationship in which frequency can increase risk of psychopathology (Benjet, Borges, & Medina-Mora, 2010; Ge, Lorenz, Conger, Elder, & Simons, 1994). There is also evidence to suggest that NLEs do not occur in isolation but are often inter-related to contextual and environmental factors (Boyes, Hasking, & Martin, 2015). Given that NLEs can have a long-term impact and many of them are uncontrollable, identifying potential mechanisms that ameliorate the relationship between NLE and internalizing problems are important. Although prior research has examined the cumulative effects of NLEs on psychopathology, timing of the NLEs is also important in considering their long-term impact of NLEs.

Adverse child events can influence development across the lifespan; influencing social, emotional, cognitive impairments, adoption of risky behaviors, disease, disability, social problems and even premature death (Center for Disease Control [CDC], 2014). Although there is a strong relationship between exposure to NLEs and psychological maladjustment and its long term impact, the relationship is not as direct, because not all youth who experience NLEs develop psychopathology. Research investigating factors that identify differences in developmental trajectories after exposure to NLEs have often concluded that intra-individual

differences such as appraisal of events and cognitive vulnerabilities, or family and societal factors influence how NLEs are experienced (Boyes et al., 2015; King & Ogle, 2014). Given that there are many factors that can help explain the variability of youth's psychopathology associated with NLEs, a more thorough investigation is needed to help in understanding specific intra-individual differences. The current study focused on self-esteem as a potential moderator between the relationship of NLEs and internalizing behaviors in early adolescents living in socially disorganized areas. The following sections will review the literature on key variables that can influence exposure to negative life events such as neighborhoods, as well as key individual supports that can help ameliorate the relationship (i.e., self-esteem).

Many early life events that influence adult behaviors have their foundation in adolescence (Dubow, Edwards, & Ippolito, 1997; Tiet, Huizinga, & Byrnes, 2010). Adolescence is a vulnerable period marked by significant transitions and changes both physically and psychologically (Santrock, 2014). Adolescence is "the period of human growth and development that occurs after childhood and before adulthood, from ages 10-19" (World Health Organization [WHO], 2015). Marked by new social and emotional challenges, including identity development, independence, and the start of romantic relationships, adolescents may be particularly vulnerable to effects of childhood adversity. Longitudinal national survey studies have found that large proportions of children and adolescents report experiencing more negative life events than adults (Finkelhor & Dzuiba-Leatherman, 1994; Finkelhor, Ormrod, & Turner, 2007; Joseph, Mynard, & Mayall, 2000). Given such a wide range and non-singular uniform period of development, the field of adolescent research has partitioned the developmental period emphasizing a variety of transitions (Santrock, 2014). The period of early adolescence (11-14) is commonly referred to as the Middle school years, while middle adolescence is through the ages

of 15-17 and late adolescence the latter half of the second decade (15-19; Santrock, 2014). As children transition to adolescence with the accompanying new physical, academic, and social challenges, there are also changes in the balance of risk and protective processes that can alter the direction of developmental trajectories (Cicchetti & Rogosch, 1997).

Key supports during the transition between childhood and adolescence include community and family (WHO, 2009). Community can have an important role during the entire period of adolescence and can also contribute to developmental trajectories for psychological functioning. Ecological theories help to describe the connection between neighborhoods and families as contextual factors and psychological well-being. More specifically, ecological theories focused on physical features of neighborhoods such as quality of housing and access to basic care can be important determinants of mental and physical health as well as influence behaviors (e.g., delinquency, anxiety, depression; Cutrona, Wallace, & Wesner, 2006; Sampson & Groves, 1989).

Social disorganization, a predominant theory under the umbrella of the ecological systems theory, can be used to explain the association between neighborhood and familial contextual factors with psychological well-being. Shaw and McKay (1942) described social disorganization as represented by persistent poverty, rapid population growth, heterogeneity (high cultural mix), and transiency combined with neighborhood dilapidation. Furthermore, Shaw and McKay (1942) supported their theory through the use of U.S. Census data and city records showing neighborhoods identified as socially disorganized also had the highest rates of crime and delinquency. Although social disorganization can be considered a classic theory, the increasing deindustrialization of Midwestern cities, middle class mobility, growing segregation of the poor, and the rapid increase of immigrant populations in most cities are indicators for



disruption of social networks and community cohesion which further supports the existing influence of social disorganization (Kubrin & Weitzer, 2003).

Social disorganization is also a social process by which children and families are at risk for deleterious outcomes in both physical and mental health. Location matters. The theory of social disorganization emphasizes a collapse of community based-controls (limited and inefficient police enforcement), rapid growth of immigration (limiting social cohesion, social support), social infrastructure (limited access to recreational centers, libraries), and people living in these disadvantaged neighborhoods are responding to environmental conditions (e.g., increase of violent behaviors; Shaw & McKay, 1942). Additionally, these limited community-based controls can lead to a social process that individuals in socially disorganized areas adopt criminal values that replace normal society values as well as accumulate greater risk of experiencing negative life events, which can also lead to poor psychological outcomes. Furthermore, the relationship between neighborhood disorganization and the social process can be observed through its influences on levels of social support, collective efficacy, and informal social control and resources available at the neighborhood level (i.e., physical and mental health care; Kingston, Huizinga, & Elliott, 2009). Population heterogeneity involving diversity of values, cultural backgrounds, and common language barriers affects social networks by significantly impeding communication and decreasing the likelihood that residents will share common values (Kingston et al., 2009). Similarly, residential mobility is expected to have an adverse effect on the formation of social networks, as it takes time to develop strong and supportive social relationships (Hendershott, 1989). Additionally, neighborhoods with a high percentage of single parent households may have fewer adults available to provide surveillance for their children. Concentrated levels of poverty also influences the formation of social networks and availability

of resources (e.g., health, medical and school services). It is well established that limited access to resources result in poorer health services and health behaviors (Diez-Roux & Mair, 2010).

Living in socially disorganized areas has been closely tied to externalizing behaviors, such as delinquency, aggression, and violence (Sampson & Groves, 1989; Shaw & McKay, 1942). A longitudinal study by Santiago, Wadsworth, and Stump (2011) followed families, children (6-10), and adolescents (11-18), and found that families experiencing poverty-related stress were contributing to delinquency, aggression, as well as directly related to anxious and social stress symptoms. Similarly, the literature has also reported internalizing problem behaviors among children and families living in socially disorganized areas. Both cross sectional and longitudinal studies have reported that low-income, urban youth exposed to chronic violence are at an increased risk for development of post-traumatic stress disorder, generalized anxiety disorder, depression, and suicidal ideation (Deng, 2006; McMahon, Coker, & Parnes, 2013; Rudolph, Stuart, Glass, & Merikangas, 2014). Additionally, internalizing behaviors can also limit the use of adaptive coping strategies (e.g., mindfulness vs. frequent rumination) and use of effective problem solving (solution focused vs. avoidance; Boyes et al., 2015; Lightfoot, Stein, Tevendale, & Preston, 2011). Therefore, it stands to reason that living in a community experiencing frequent stressors can exacerbate internalizing behaviors by having limited locus of control due to the collapse of community based controls, lack of peer support due to the residential mobility of family and peers, and limited access to physical and mental health resources. Another way that adverse neighborhoods engender internalizing behaviors is by increasing the risk of experiencing negative life events, which can influence psychological well-being (Cutrona et al., 2006).

NLEs are subjective perceptions of a social experience or event that has psychological impact on the individuals (Compas, 1987; Goodyer, 1991). This definition does not delineate duration, type, and effects as it pertains to long-term psychological impact and is distinguished from chronic life stressors by discrete (time limited) occurrences (Goodyer, 1991). The influences of NLEs on children and adolescent functioning has been extensively studied; results suggest that youth experiencing negative life events (e.g., death of a parent, loss of a close friend) are at risk for psychopathology (Kessler et al., 1997; Kessler et al., 2010). A study by Kashani and colleagues (1990) examined the number of negative life events in a clinical population of children in a psychiatric hospital and found that children with more severe psychopathology had experienced a greater number of NLEs. Population based studies and national surveys conducting longitudinal studies have found that 28.9% of the population had experienced negative life events in their lifetime, and that 30% of NLEs accounted for psychopathology (Kessler et al., 2010). Researchers examining childhood and adolescent exposure to NLEs have found empirical evidence to suggest that cumulative exposure to NLEs can predict higher levels of internalizing behaviors such as anxiety and depression (Allen, Rapee, & Sandberg, 2008; Kim, Conger, Elder, & Lorenz, 2003; Spinhoven et al., 2010). The influence of negative life events can also have long-term impacts. The Adverse Childhood Experiences study facilitated through various collaborators including the Centers of Disease Control (CDC) found that, as the number of adverse childhood experiences (i.e., incarceration of a household member, parental separation or divorce) got higher, the risk of poor health related quality of life, suicide attempts, and early initiation of sexual activity increased (CDC, 2014). Therefore, the accumulation of negative life events can have a long-term impact on mental health; however, there may be environments in which the risk of negative life events would be greater. Given that

living in socially disorganized areas puts both children and families in a stressful environment that can lead also lead to psychopathology, it may also increase the risk of experiencing NLEs.

NLEs can be potential triggers for the onset of psychopathology and risky behaviors. However, a majority of survey-based research on life events has indirectly interpreted risk of NLEs as a risk faced individually and less on the inter-related influence of communities that experience a breakdown in social infrastructure. Additionally, ecological studies have disproportionately focused on externalizing behaviors (i.e., aggression, violence, delinquency), likely because those often create more burden on the community than those experiencing internalizing symptoms. Some ecological studies have found children and families living in socially disorganized areas have an increased risk of experiencing negative life events such as losing a job, residential mobility, exposure to violence, limited resources, lack of safety, and victimization (Dubow et al., 1997; Finkelhor et al., 2007). Although the argument could be made that these are contextual features rather than life events, however, living in chronically stressful contexts and experiencing negative events are not mutually exclusive. For example, adolescents living in socially disorganized areas may experience having a parent go to jail, changing school, losing a close friend, or having parents separate or lose a job. Specifically, Kingston, Huizinga, and Elliot (2009) conducted a longitudinal study of youth (12-17 years old) and found that socially disorganized neighborhoods with greater rates of poverty and fewer institutional resources (i.e., recreational centers, daycare, health care providers, library) also had a higher prevalence of violent offending (i.e., rape, aggravated assaults). Additionally, a number of other studies have demonstrated that children and adolescents living in areas of neighborhood disadvantage was a predictor for victimization, engage more with delinquent peers, increased

levels of stressors and mental health disorders (Gibson, 2012; Latkin & Curry, 2003; Santiago et al., 2011).

Negative life events and psychological health examined from both the prospective and record linkage studies that use large automated databases have consistently found an association between the experience of NLEs and subsequent periods of major depressive disorder, anxiety, and social anxiety (Kim et al., 2003; Lewis, Byrd, & Ollendick, 2012). The strength of this association has been shown to vary depending on the appraisal of the life events (Boyes et al., 2015). Errors in the cognitive processes related to negative self-evaluations are conceptualized to play an important role in internalizing behaviors (de Jong, Sportel, de Hullu, & Nauta, 2012; Hur, Kim, & Kim, 2011). More specifically, the literature has suggested that the significant relationships between negative life events and the impact on psychological functioning can be understood through a cognitive diathesis model. Beck's cognitive theory of depression, for example, is one such cognitive theory, which has produced a large body of empirical research (Beck, 1967, 1983). The cognitive diathesis stress model suggests that negative appraisal of events, resulting from distorted schema containing cognitive distortions and attitudes (e.g., "I must be good at everything" or "I am a failure") increases the likelihood of internalizing symptoms such as anxiety or depression following a negative event (Beck, 1967, 1983). The cognitive diathesis model has also been studied in adolescents (early and late adolescents) similarly suggesting that cognitive distortions such as negative appraisals and attitudes contribute to symptoms of depression (Abela & Sullivan, 2003; Lewinsohn, Joiner, & Rohde, 2001). A study by Kercher and Rapee (2009) described the cognitive diathesis stress theory as the interaction between cognitive vulnerabilities (e.g., negative attributional style, tendency to ruminate) and exposure to negative events to the onset of depressive symptoms. Other

researchers have also explored alternative cognitive mechanisms and suggested that high self-esteem can serve to decrease negative appraisals of interactions, increase effective coping strategies, and reduce the likelihood of psychopathology (Zeigler-Hill, 2011). In particular, a study by Abela and Skitch (2007) examined the cognitive diathesis stress theory in a sample of children between the ages of 6 to 14 to determine whether high self-esteem buffers cognitively vulnerable youths against increase depressive symptoms following an increase in hassles. Results from this study provided support for the applicability of the cognitive diathesis stress model and found that children and early adolescents with lower levels of self-esteem reported significantly higher levels of depressive symptoms.

A broad definition of self-esteem is an individuals' global evaluation of their self-worth (Caprara, Alessandri, Barbaranelli, & Vecchione, 2013). Global self-esteem can serve as a guide to an individual's self-worth and attitude towards self (Erol & Orth, 2011; Huang, 2010; Kernis, 2005; Orth, Robins, & Widaman, 2011; Zeigler-Hill, 2011) and as an important function in a system of reciprocal interactions between one's behavior and social environment (Isomaa, Vaananen, Frojd, Kaltiala-Heino, & Marttunen, 2012). More specifically, individuals with high levels of global self-esteem are more confident about their abilities and the success of their efforts, have improved mood regulation and have more supportive resources to buffer them from aversive events (Dumont & Provost, 1999; Kernis, 2005; Lowry, Sallinen, & Janicke, 2007).

In order to examine the life-span trajectory of self-esteem, Orth et al. (2011) conducted a longitudinal study. Their results suggested that self-esteem influences the development of important life outcomes, including relationship satisfaction, job satisfaction, occupational status, and positive and negative affect. Self-esteem has also been intimately connected with psychopathology, with individuals who have self-esteem being more likely to experience various

forms of psychopathology such as depression, suicidality, and anxiety (Hur et al., 2011; Isomaa et al., 2012; Kim & Cicchetti, 2009). Steiger, Allemand, Robins, and Fend (2014) conducted a longitudinal study evaluating adolescent self-esteem and adult depression. The sample started with adolescents with ages 12-16 years of age with a follow up assessment when participants were 35 years of age. Results suggested that low adolescent self-esteem levels predicted various adult outcomes such as poor health and depressive symptoms two decades later. Moreover, global self-esteem also plays an important supportive role during the transitional period of adolescent development, specifically, self-esteem influences social resources such as peer acceptance, building social support, and academic performance (Dumont & Provost, 1999; Hur et al., 2011). Therefore, global self-esteem is an important consideration in the unique developmental period of adolescence. Given that the transition period from childhood to adolescence encompasses changes both in physical and psychological development (Santrock, 2014), difficulties with this transition can lead to mental health disorders having an onset in adolescence. Furthermore, changes in self-esteem as well as an increase in stressful life events (Kercher & Rapee, 2009) can also have long-term implications (Orth et al., 2011). On the other hand, high levels of self-esteem appear to have beneficial value, which can serve as a buffer from negative experiences (Bos, Huijding, Muris, Vogel, & Biesheuvel, 2010; Grant et al., 2006; Metalsky, Joiner, Hardin, & Abramson, 1993; Tiet et al., 2010).

Self-esteem has been vastly studied in psychology, identifying various domain specific esteems (body esteem, academic esteem, and implicit self-esteem) as well as the stability of self-esteem. Studies focused on the stability of self-esteem amongst children and adolescents have found an increase in stability from childhood to adolescence and that self-esteem did not vary with regards to gender, nationality, or scale used (Steiger, Allemand, Robins, & Fend, 2014;

Trzesniewski, Donnellan, & Robins, 2003) Furthermore, considerable research has evaluated various domain specific self-esteems, these specific self-evaluations are predictive of global self-esteem, particularly if they are central to an individual's self-worth (Kernis, 1993, 2005; Sowislo & Orth, 2013).

Some studies have found that higher levels of self-esteem is a favorable outcome for the adolescent developmental process (Isomaa et al., 2012; Lowry et al., 2007), however, various researchers have found mixed results regarding levels of self-esteem. A large proportion of the literature suggests that low levels of self-esteem have been associated with a variety of psychopathologies including disruptive behaviors, suicidality, and internalizing behaviors (Bos et al., 2010; Hur et al., 2011). Other studies have found that low levels of self-esteem have been related to delinquency and aggression (Baumeister, Campbell, Krueger, & Vohs, 2003). Similarly, studies have found inflated levels of self-esteem with narcissism, which is commonly associated with delinquency and anti-social behaviors (Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005). Consequently, Kernis (2003) described the optimal level of self-esteem as a well-developed psychological process (i.e., "favorable feelings of self-worth that arise naturally from successfully dealing with life challenges" p.13).

Many studies have focused on identifying risk and vulnerability factors that help moderate the relationship between adverse events and psychopathology, meaning a factor can alleviate or exacerbate outcomes. A systematic review paper by Grant et al. (2006) reviewed studies that evaluated moderators for stressors and psychopathology for children and adolescents. The review found that a large proportion of studies used moderators ranging widely between sociodemographic variables (socioeconomic status, neighborhood quality, and ethnicity), child, parental, family, and environmental factors. Of those moderators, approximately 31 studies



identified cognitive variables (e.g., coping, attribution) as moderators between stressors and psychopathology in children and adolescents. For example, Metalsky, Joiner, Hardin, and Abramson (1993) found a significant relationship between the interacting effects of attributional styles, self-esteem and experienced negative life events among adolescents. Results suggested that cognitive vulnerabilities such as negative or dysfunctional attributional styles, low self-esteem and experienced negative life events can serve as proximal influences on depression. Although cognitive vulnerabilities such as negative attributional style and dysfunctional attitudes can lead to depression and anxiety (Abela & Skitch, 2007; Abela et al., 2011), low self-esteem can also contribute to depressive symptoms through the cognitive diathesis stress model (Cicchetti & Toth, 1998; Kercher & Rapee, 2009; Marcotte, Fortin, Potvin, & Papillon, 2002; Youngs, Rathge, Mullis, & Mullis, 1990). However, studies have yet to explore the moderating role of self-esteem in helping to explain the relationship between stressful life events and internalizing behaviors in early adolescents living in areas of poor neighborhood quality. Consistent with the reasoning of the cognitive diathesis stress model, self-esteem can influence the attribution of negative life events that can lead to the development and maintenance of depression and other internalizing behaviors.

Accumulating evidence suggests that adolescents reporting NLEs can account for a significant percentage of the variability in depressive symptoms (Cicchetti & Toth, 1998; Marcotte et al., 2002). The period of adolescence is broad and encompasses a variety of changes. Similarly, the literature has for the most part, broadly examined the period of adolescence, leaving an imminent need to investigate more specifically the period of early adolescence. The current study also expands on the previous literature by testing the hypotheses that self-esteem moderates the relationship between negative life events and psychological functioning for early

adolescents living in socially disorganized areas. In addition, the current study also extends previous research by systematically evaluating neighborhood quality of participants.

Furthermore, the present research also examines the associations of demographic variables with self-esteem, negative life events, and internalizing behaviors among a diverse sample of early adolescents. The literature has found discrepancies between genders on levels of self-esteem, suggesting that female youth exhibit lower levels of self-esteem than males (Ethier et al., 2006; McClure, Tanski, Kingsbury, Gerrard, & Sargent, 2010; Santrock, 2014). Similarly, the literature has found differences in the emergence of internalizing symptoms, reporting that female youth (11-14) report more internalizing symptoms than males (Leadbeater, Kuperminc, Blatt, & Hertzog, 1999). Further analyses are also conducted to identify potential age variability in internalizing symptoms, self-esteem, and negative life events. Additional analysis is also considered in regards to ethnicity on dependent variables. Studies have consistently found that ethnic minorities are more likely than White children and families to live in areas with concentrated disadvantage, higher levels of self-esteem, and exposure to NLEs (Lewis et al., 2012).

### *Hypotheses*

The five hypotheses tested in the present study are that:

1. The number of perceived negative life events will be negatively correlated with self-reported internalizing behaviors.
2. The self-reported levels of self-esteem will be negatively associated with internalizing behaviors.
3. Individuals with higher levels of self-esteem will have lower reported negative life events.

4. Higher levels of self-esteem will moderate the relationship between negative life events and psychological functioning.
5. The sample will largely be located in socially disorganized neighborhoods and report higher number of negative life events than the national average.

## **Method**

### **Participants**

Participants were adolescents who attended a summer day camp involving inner city youth in a large Midwestern area. The data collected are part of a larger program evaluation for the Alvin Ailey Dance Camp. The analysis used data from five successive years of the camps (2009-2013). Although parent and camper pre and post camp data were collected, only camper pre-camp data will be analyzed for this current study, in order to avoid any effects of participation in the camp (i.e., increased peer support, self-esteem). Adolescents were selected for camp based on sociodemographic risk factors (i.e., live with anyone other than parents, single parent, sibling/parent incarcerated), ethnicity, level of need (i.e., receives government support; child receives free or reduced lunch), school (unaccredited public schools), and neighborhood risk factors (low income, high crime). Parents of campers were invited to participate in the study during camp orientation meetings. Parents of adolescents who were not able to attend orientation meetings were still able to participate at the camp office when registering their campers. Parents were informed that their decision to participate and permit their children to participate in the research project would not impact services provided by summer dance camp. Parents and adolescents who chose to participate were compensated for their time and effort with a DVD of their child's final dance performance.

A total of 603 middle school aged campers (526 female, 74 male), ages 10-15 years ( $M = 12.22$ ,  $SD = .842$ ) participated in this study. The sample for this analysis consisted of 603 youths from various ethnically diverse backgrounds. Approximately 57% ( $N = 340$ ) of campers identified themselves as African American. Approximately 15% of the campers identified themselves as Hispanic American, as 15% as White or Caucasian, as 10% as American Indian or Native American and 3% Pacific Islander or Asian.

### **Procedure**

The current study was part of a larger program evaluation; all campers attending during data collection periods had the opportunity to participate and completed measures. During parent camp orientation meetings, researchers explained the study in detail and asked parents/caregivers to sign a consent form. Oral assent was also obtained from the campers before completing measures. The larger program evaluation encompassing the present study was reviewed and approved by the University of Kansas Institutional Review Board.

### **Measures**

**Demographics.** Parents, caregivers and youth completed demographic forms. The adolescent measure captured youths' gender, age, and ethnicity. Caregiver and parent demographic forms captured age, number of children in the household, yearly income, and highest level of education.

**Neighborhood Variable.** Given that campers were selected based on sociodemographic variables and neighborhood considerations, a neighborhood variable was measured. Several structural characteristics were assessed through the sample participant's zip code. Variables were derived from the social disorganization theory using the U.S. Census and include: poverty, public assistance, female headed families, percentage unemployed, crime (i.e., violent, sexual,

property), and residential mobility. After reviewing the literature, a neighborhood quality index was identified from census variables that have been strongly correlated with neighborhood quality (Buron & Patrabansh, 2008; Sampson, Raudenbush, & Earls, 1997; Shaw & McKay, 1942). Six census variables were rated 0 to 1 to indicate disadvantaged neighborhood qualities. Designated as 1 included: (a) sample average to indicate neighborhoods that were worse than the sample average, (b) national averages to indicate neighborhoods that were worse than the national average, (c) sample medians to indicate neighborhoods that were worse than half or more of the sample neighborhoods, (d) sample 25th percentiles to indicate neighborhoods that were worse than 25% of the sample neighborhoods, (e) sample 75th percentiles to indicate neighborhoods that were worse than 75% of the sample neighborhoods, and (f) sample 10<sup>th</sup> percentiles to indicate neighborhoods that were worse than 10% of the sample neighborhoods. Higher scores on this rating reflect more concentrated disadvantage.

**Negative life events.** Campers completed the Life Events Checklist (LEC; Johnson & McCutcheon, 1980) to assess their perceptions of external life stressors. The LEC consists of 45 events that may occur in the lives of youths (i.e., parent left home, parent was incarcerated, got in trouble at school, moved to a new school). Campers were asked to report whether the event occurred in the last 12 months, and, if so, their perception of the event was rated as positive (“mostly good”) or negative (“mostly bad”).

The Life Events Checklist has demonstrated ample test-retest stability of LEC,  $\alpha = .72$ ;  $p < .001$  (Brand & Johnson, 1982). The LEC is a commonly used method for assessing the number of events the youths experience and for measuring youth’s perception of the occurrence of stressful, or major life events (Jackson, Kim, & Delap, 2007; Suldo & Huebner, 2004; Williamson et al., 2003). Procedures used by Jackson et al. (2007) suggested that the LEC

should be modified by removing several questions (i.e., “having an abortion,” “losing a job”) and replacing them with more age-appropriate external stressors (i.e., “getting braces,” “moving to a foster home”). Negative life events scores were recoded 0 to 1. Events that were rated as a 2 (“Yes, it was bad”) were recoded as 1 and those events that were rated as a 0 (No, it did not happen to”) or a 1 (“Yes, it was good”) was coded as a 0.

*Factor Analysis of the NLE.* A confirmatory factor analysis using structural equation modeling (SEM) was completed to investigate the factor structure of the NLE and determine if the observed indicators (life events) relate to their latent construct (*Negative Life Events*). Parameters were free to estimate and the latent construct variance was fixed to one. Results from the CFA determined that this conceptualization of the model had poor fit ( $\chi^2_{(1125, n = 603)} = 3070.197, p < .001, RMSEA = .054_{(.051;.057)}, TLI = .600, CFI = .617$ ). Given the poor fit, and overidentified model, meaning there were more observed variance and covariance values than the number of parameters that were to be estimated, parceling methods were used. Parceling helps reduce the large number of items related to negative life events (45 items), analyze the shared variance amongst these indicators and reduce correlated residuals and dual factor loadings as well as providing a just identified model, meaning equal number of variance and covariance for the number of parameters to be estimated (Little, Cunningham, Shahar, & Widaman, 2002). Parcels were created by using a univariate approach in which the factor loadings at the item level of the construct were randomly assigned to three parcels. To create these parcels, the highest loading item was in parcel one, the next highest in parcel two, and the third highest loading in parcel three.

Model comparisons were conducted between the full model (45 items) and the nested parceled model. The models were evaluated using the chi square, comparative fit index (CFI),

Tucker Lewis Index (TLI), and root mean square error of approximation (RMSEA), with CFI and TLI values  $\geq 0.90$  considered good/acceptable fit, and RMSEA values between  $< .05$  and  $< .08$  considered close to acceptable (Browne & Cudeck, 1993; Hu & Bentler, 1999; MacCallum, Browne, & Sagawara, 1996). Model comparisons between the full model and the nested model used fit indices that indicated that the parceled model provided the best fit for the data. Factor loadings and proportion of variability values are provided in Table 1.

Table 1. *Item Loadings for Negative Life Events*

Life Events Sample	Standardized Loading	R <sup>2</sup>
In the past year, have you moved to a new home?	.061	.023
Do you have a new brother or sister?	.149	.030
Have you changed to a new school?	.206	.037
Has any family member been seriously ill or injured?	.198	.048
Have your parents gotten divorced?	.204	.042
Have your parents been arguing more?	.170	.034
Has your mother or father lost his/her job?	.233	.004
Parceled Item Loadings for Negative Life Events		
Parcel 1	.754	.568
Parcel 2	.812	.659
Parcel 3	.766	.587

**Self-Esteem.** Campers completed the self-esteem subscale of the *Behavior Assessment System for Children- Second Edition* (BASC-2). The BASC-2 has various forms, such as parent, teacher, child and adolescent to assess behavior patterns. Therefore, youth completed the one of the two self-report of personality (SRP) form (specific form for adolescents and children; SRP-A and SRP-C), which is a self-report personality inventory that includes statements that respondents answer in two different formats (i.e., true/false and Likert rating; Reynolds & Kamphaus, 2004). Two versions of the BASC-2 based on their age were administered to youth. Both versions had the same self-esteem items. Reynolds and Kamphaus (2004) described the self-esteem scale as an assessment of child and adolescent self-satisfaction, with reference both to physical (“I like the way I look”) and to more global characteristics (“I like who I am”). A

covariance structure analysis revealed high factor loadings for items ranging from  $\lambda = -.76$  to  $.65$  (Reynolds & Kamphaus, 2004). Additionally, the reliabilities for the composite scales are reported to be between the upper .70s to the low .80s (Reynolds & Kamphaus, 2004). Responses in this scale were calculated and reported as T scores; low T scores (20-40) tended to reveal significant dissatisfaction with themselves.

**Internalizing Problems.** The BASC-2 (SRP-A and SRP-C) additionally provides a subscale scores from the Internalizing Problems Index, which is a global indicator of serious affective disturbance. Comprised of three scales, social stress, anxiety, and depression (Reynolds & Kamphaus, 2004). High scores on the SAD (social stress, anxiety and depression) triad represent significant emotional distress characterized by depression and anxiety. The BASC-2 assesses for symptoms associated with various childhood clinical disorders in the DSM- IV TR and has been used to aid in screening and diagnosis (Lapointe, Garcia, Taubert, & Sleet, 2010; Reynolds & Kamphaus, 2004). Test-retest reliability for the Internalizing Problems Index is  $\lambda = .81$ ,  $p < .05$ . Additionally, the  $\alpha$  coefficients in this sample for the anxiety scale were as follows: child,  $\alpha = .82$ ; and adolescent,  $\alpha = .91$ . The  $\alpha$  coefficients for the depression scale were as follows: child,  $\alpha = .66$ ; and adolescent,  $\alpha = .79$ . The  $\alpha$  coefficients for the social stress scale were as follows: child,  $\alpha = .68$ ; and adolescent,  $\alpha = .83$  (Reynolds & Kamphaus, 2004). Both child and adolescent versions had the same scales and questions for internalizing behaviors. Scoring for both internalizing problems and self-esteem on the BASC-2 is based on a normative sample distributions and reports t-scores ( $M = 50$ ;  $SD = 10$ ). Some data from the current sample (20%) were also utilized in another study focused on identifying risk factors that impact adolescent functioning (Wilson, 2012).



*Factor Analysis for the BASC-2.* The BASC-2-SRP was normed on primarily Caucasian youth, therefore, it was important to evaluate the factor structure of the BASC-2-SRP with the current sample. To evaluate the measurement properties of the BASC-2-SRP, a measurement model was estimated to determine how well the indicators load (subscale indicators: self-esteem, depression, anxiety, and social stress) onto the latent variables (i.e., *Internalizing Behaviors* and *Self-Esteem*). All parameters were free to estimate and variances for all latent variables were fixed to one. The results of the factor analysis indicated that the initial freely estimated model demonstrated acceptable model fit ( $\chi^2_{(12, n=603)} = 36.307$ , CFI = .963, TLI = .900, RMSEA = .100), indicating that the factor structure of the child and adolescent BASC-2 was supported for the current sample. Factor loadings and proportion of variability values are provided in Table 2.

Table 2.  
*Scale Loadings for the BASC-2*

BASC-2 Subscales	Standardized Loading	R <sup>2</sup>
Social Stress	.816	.667
Anxiety	.735	.541
Depression	.800	.640
Self-Esteem	-.636	.405

### **Data Analysis**

Structural equation modeling (SEM) using *Mplus v. 7.7* software was used to analyze the data in an effort to help understand the influence of contextual variables (self-esteem and negative life events) on key developmental outcomes (internalizing problems) as well as the moderating role of self-esteem. SEM is an extension of multiple regressions with the added benefit of removing measurement error and allowing for several explanatory pathways between variables to be examined (Muthén & Muthén, 2012). When relationships among latent constructs

are examined, the measurement error has been estimated and removed, leaving only the common variance (Allison, 2003).

A measurement model was tested using confirmatory analyses for each factor (i.e., *Internalizing Behaviors, Self-Esteem, and Negative Life Events*). After confirming the measurement models, the extent to which the model fits the data, a structural model was estimated. To evaluate hypotheses 1-4, a structural model was estimated to evaluate the apriori defined pathways and model fit statistics were used to determine if this conceptualization fits the data. The structural model only evaluated latent variable relationships. Similarly, to determine whether self-esteem moderates the relationship between internalizing behaviors and negative life events, a second structural model was estimated. Both models allow for the hypothesis to be adequately measured and allow for estimation of the relationship.

**Missing Data.** The data set had approximately 1% missing. The missing data were handled using modern missing data analysis, specifically the full information maximum likelihood (FIML) method. FIML estimates parameters on the available data as well as the implied values of the missing data given by the observed data through the use of a derived algorithm. FIML then estimates parameters and standard errors simultaneously (Allison, 2003). The FIML algorithm was available through *Mplus v7.7*.

## Results

### Descriptive Statistics

Participants included 603 early adolescents between the ages of 10-15 years old ( $M = 12.22$ ,  $SD = .842$ ). Sample characteristics are shown in Table 3. Preliminary analysis assessed descriptive statistics and the distribution of scores from the study measures. Results from descriptive analysis revealed that 91.8 % of early adolescents reported at least 1 NLE within the

past year (range: 0-21). With regard to internalizing behaviors, 16.5% of early adolescents reported within the “at-risk” to “clinical” range for social stress, 15.8% anxiety, 21% depression, and 16.6% low levels of self-esteem. Further examination between sociodemographic variables revealed no significant differences amongst groups for NLE reported, internalizing behaviors and levels of self-esteem.

Table 3. *Demographics*

	Sample <sup>1</sup> (n = 603)
Income (n, %)	
<\$10,000	116, 17.9
\$10,00-\$20,000	111, 17.1
\$20,000-\$30,000	134, 20.7
\$30,000-\$40,000	101, 15.6
\$40,000-\$50,000	51, 7.9
\$50,000-\$60,000	32, 4.9
>\$60,000	55, 8.5
Average Number of Children in the Household	4.67, (1.822)
Sex (n, % female)	527, 87.2
Race (n, %)	
Asian	8, 1.3
American Indian or Alaska Native	64, 10.6
African American	340, 56.38
Hispanic	90, 14.9
Pacific Islander	3, 0.5
White	95, 15.7
<b>BASC-2 Subscales</b>	<i>M</i> <i>SD</i>
Social Stress Symptoms <sup>a</sup>	48.97 (11.24)
Anxiety <sup>a</sup>	48.99 (11.336)
Depression <sup>a</sup>	49.84 (10.869)
Self-Esteem <sup>b</sup>	52.54 (9.759)

<sup>a</sup>T-scores 60-65 considered to be in the “at risk” range, scores >70 considered to be in the “clinical” range.

<sup>b</sup>T-scores 31-40 considered to be in the “at risk” range, scores <30 considered to be in the “clinical” range.

<sup>1</sup> Second column in table indicates percentage of variable.

### Structural Model 1: Latent Regressive Paths

To test hypotheses 1-4, a three-factor CFA model was estimated to validate the measurement model. The measurement model demonstrated good fit ( $\chi^2_{(12, n=603)} = 46.378, p < .05$ ; RMSEA = .069<sub>(.049-.090)</sub>; TLI = .947; CFI = .970), which allowed for a structural model and latent regressive paths to be estimated through SEM. All parameters were free to estimate and variances for all latent variables were fixed to one. The structural model with *Negative Life Events* predicting *Internalizing Behaviors* had a significant latent regressive path ( $\beta = .254, p < .001$ ). More specific examination of the NLEs reported and specific internalizing symptoms revealed some significant associations. Youth that commonly reported losing a friend, trouble with teachers at school, and/or had a close family friend die also reported symptoms of depression. Youth who commonly reported losing a close friend, trouble with siblings at home, and breaking up with a boyfriend/girlfriend also reported symptoms of anxiety and depression. Lastly, youth who also commonly reported parents losing a job or getting a new job also had significant symptoms of social stress.

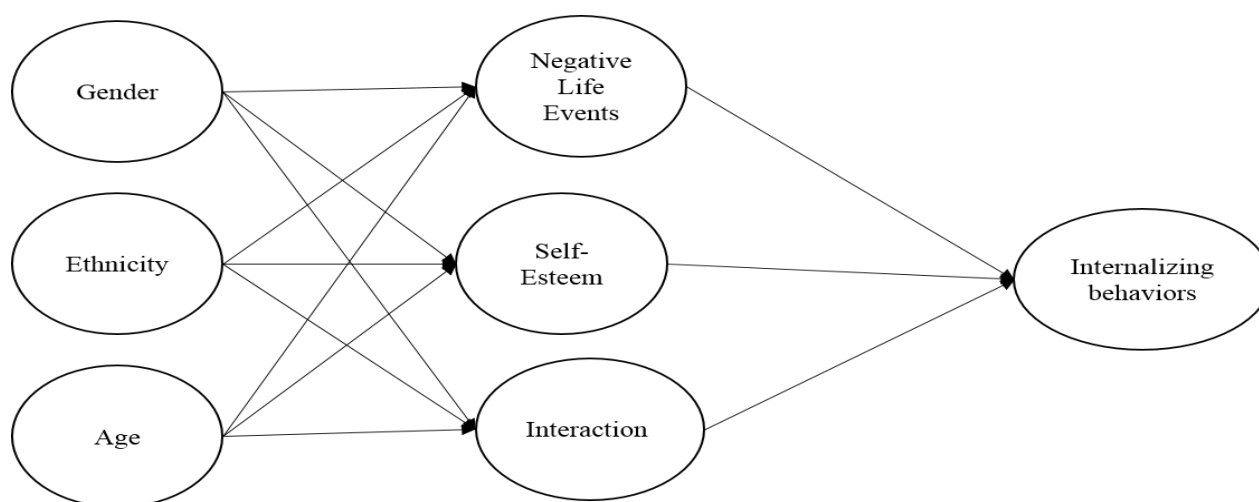
To test hypothesis two and three, latent regression paths were also estimated. The results from the analysis yielded significant parameter estimates, specifically the standardized coefficient for *Self-Esteem* predicting *Internalizing Behaviors* ( $\beta = -.580, p < .001$ ) and *Negative life events* predicting *Self-Esteem* ( $\beta = -.202, p < .001$ ).

### Structural Model 2: Self-Esteem as a Moderator of NLE and Internalizing Behaviors

A second structural model was created using similar scaling methods as used for the previous model. This structural model analyzed the moderation hypothesis. In this model, indicators for *Negative Life Events*, and *Self-Esteem* were combined to create an *Interaction* construct that would predict *Internalizing Behaviors*. Indicators for *Negative Life Events* and

*Self-Esteem* were centered and their product created indicators for a new latent variable, *Interaction*. Results yielded acceptable to close fit with the new interaction structural model, see Figure 1 for model fit indices. Closer examination of the model results yielded non-significant beta coefficients for *Interaction*, but remain significant for *Self-Esteem* and *Negative Life Events*. Accounting for the influence of age, gender and ethnicity, the overall structural model fit with *Negative Life Events*, *Self-Esteem*, and *Interaction* predicting *Internalizing Behaviors* demonstrated adequate model fit, see Figure 1.

Figure 1. Structural Model. Model Fit:  $\chi^2_{(81, n=603)} = 289.741$ , RMSEA = .065 (.057;.074), CFI = .910, TLI = .861



Of the covariates that were examined, only youth's age varied with negative life events in this study. However, ethnicity, gender and age were not significant contributors to the variance in internalizing behaviors and levels of self-esteem. See Table 4 for latent regression paths.

Table 4.  
*Standardized Loadings and Standard Errors of Covariates Tested for each Latent Outcome.*

	$\beta$	Standard Errors	P value
<b>Negative Life Events</b>			
Gender	.114	.046	.123
Age	.117	.046	.011
Ethnicity	.109	.048	.065
<b>Self-esteem</b>			
Gender	-.016	.041	.698
Age	.030	.041	.464
Ethnicity	.014	.041	.726
<b>Internalizing Behaviors</b>			
Gender	.006	.037	.871
Age	.001	.037	.997
Ethnicity	.012	.037	.745

### Neighborhood Variables

The sample had a significant majority of participants located in socially disorganized areas. Seventy five percent of the participants had above the national norm for the variables of (a) female-headed households, (b) below the poverty line, (c) fewer individuals obtaining a high-school degree, and (d) receiving public assistance (i.e., free or reduced lunches). A majority of the sample also had above the sample mean for violent crimes (i.e., aggravated assault, murder) and burglaries. The total score for neighborhood quality was calculated using six census variables and was rated based on six cut-off scores. The distribution of the neighborhood variables were dissimilar across broad categories with ratings ranging from 7 to 24, suggesting concentrated neighborhood disadvantage. That is, distributions of the various scores for each of the six census neighborhood ratings varied, but were largely aggregated towards the high end ( $M = 17.2$ ,  $SD = 5.80$ ) of the distribution. Furthermore, a total average of 6 NLEs were reported by youth. Commonly reported NLEs included death of a family member, a parent was sent to jail, or lost a close friend.

## Discussion

The purpose of the present study was to identify relationships between negative life events, internalizing behaviors, and self-esteem, and to identify the moderating role of self-esteem among early adolescents. Although adolescents who experience negative life events have reported increased levels of internalizing behaviors (Abramson, Metalsky, & Alloy, 1989; Braboy-Jackson & Finney, 2002) and living in socially disorganized areas are at an increasing risk of exposure to negative life events (Sanchez, Lambert, & Cooley-Strickland, 2013), no study has examined the potential moderating effects of high levels of self-esteem on internalizing behaviors for early adolescents living in socially disorganized areas. The primary aim of this study was to use structural equation models to examine the mechanism of self-esteem in moderating the relationship between negative life events and internalizing behaviors in youth. The findings in the present study suggest that self-esteem was significantly related to internalizing behaviors, specifically, higher levels of self-esteem were associated with lower reported levels of internalizing behaviors for early adolescents.

These results are consistent with the literature that has identified experiencing and the accumulation of adverse events to predict increased internalizing problems (Braboy-Jackson & Finney, 2002; Tiet et al., 2010; Williamson et al., 2003). Furthermore, over 90% of the sample reported a NLE, which suggests that early adolescents are frequently experiencing stressors in various domains including family, school, and peers, with older adolescents reporting NLEs at a higher frequency. Results also suggest that, as the period of adolescence becomes more intricate and complicated (e.g., increased social and academic demands), older adolescents experience NLEs at a greater frequency. Given that NLEs have a dose response relationship, adolescents who report multiple NLEs may need to be screened for potential internalizing

symptoms and provided treatment as indicated. Furthermore, the literature has identified commonly reported NLEs, which are death of a family member or friend, parent losing a job, or parent going to jail (Dubow et al., 1997). Similarly, the present study identified similar NLEs, however, overall, the youth reported NLEs at a greater frequency than other studies (Duke, Pettingell, McMorris, & Borowsky, 2010; Joseph et al., 2000). Extant research that has focused on the cumulative effect of NLEs in adolescence has consistently found that frequent stressors account for a significant proportion of adolescent psychopathology (Kessler et al., 2010). These findings suggest that these adolescents may be at a greater risk for psychopathology.

Additionally, the second hypothesis was supported in that youth who reported lower levels of self-esteem (i.e., “I do not like myself”) also reported higher levels of internalizing behaviors (i.e., anxiety, depression and social stress). As the transition between childhood to adolescence becomes more demanding, low levels of self-esteem may increase the risk of the onset and maintenance of internalizing psychopathology as well as influence other important life outcomes such as relationship satisfaction, and social support (Sowislo & Orth, 2013). Furthermore, low self-esteem can be an indicator of potential internalizing problems in adolescence. The findings also continue to support the literature, which suggests that low levels of self-esteem influence internalizing behaviors (Isomaa et al., 2012). Further analysis of gender, age, and ethnicity differences on varying levels of self-esteem resulted in non-significant differences amongst these covariates. These results suggest that levels of self-esteem do not vary across age and, thus, lend some support for the stability of self-esteem and the use of global self-esteem.

As predicted, adolescents who reported more negative life events, also reported lower levels of self-esteem. Additionally, lower levels of self-esteem were also associated with



internalizing behaviors. Results suggest that self-esteem can be a cognitive vulnerability that can be related to both NLEs and internalizing behaviors. Therefore, low self-esteem can be considered an important vulnerability marker for depressive symptoms and anxiety (Creemers, Scholte, Engels, Prinstein, & Wiers, 2013). These findings also support previous research demonstrating that, in general, lower levels of self-esteem are associated with elevated risk of internalizing symptoms and NLEs (Cowen, Pryor-Brown, & Lotyczewski, 1989; Ge et al., 1994; Steiger et al., 2014). Findings may also support incorporating self-esteem building activities into school curriculum, after school programs, or personal development courses.

Contrary to the hypothesis, self-esteem did not moderate the relationship between negative life events and internalizing behaviors. This non-significant relationship may be due to the potential multidimensionality of the latent construct, *Negative Life Events (NLE)*. Given that the Life Events Checklist has 45 items, it is possible that NLE has a lower order factor structure, which may be influencing results. More specifically, the Life Events Checklist may have more indicators than were originally parceled, which may indicate that there are different domains in which Negative Life Events could be influencing internalizing behaviors and self-esteem. For example, dimensions such as family (new brother or sister), peers, school, home life (removed from parental care; parents divorced), or delinquency (i.e., put in jail, trouble with the police) could better identify the observed indicators of the construct. Similarly, within those potential dimensions, there are additional layers including parental versus sibling events, or peers versus romantic relationship events. The potential dimensionality of this measure warrants future research to conduct an exploratory factor analysis in order to identify the correct number of indicators for the Life Event Checklist and develop unique dimensionalities that can better explain the influence of negative life events on various internalizing behaviors when applied to a

moderator model. Similarly, self-esteem may also have lower order factors that may be affecting results and benefit from an exploratory factor analysis. Future researchers examining the influence of self-esteem will want to incorporate measures that incorporate various domains of self-esteem (e.g., social competence, performance, physical appearance) as part of global self-esteem. Self-concepts, especially self-esteem, are important protective factors to consider as they play a role in coping with stress, academic achievement, job and relationship satisfaction, and physical and mental health ((Birkeland, Melkevik, Holsen, & Wold, 2012; Orth et al., 2011). Therefore, it would be important to develop a self-esteem measure with comprehensive psychometric properties that incorporates a hierarchical construct that addresses the dimensionality of self-esteem.

Results from the analysis of neighborhood variables did support the final hypothesis suggesting that areas with social disorganization influence exposure to negative life events. Neighborhood quality analysis and descriptive statistics revealed that a majority of the participants reside in areas of concentrated disadvantage; participants reported on average a total of six NLEs. The total number of events is higher than some other studies have reported (Kessler et al., 2010; Kim et al., 2003; McLaughlin et al., 2012; Timmermans, van Lier, & Koot, 2010). These results suggest that environmental factors could place children and adolescents at risk for exposure to NLEs, which can later influence the onset and maintenance of internalizing behaviors.

Furthermore, previous research has described risk of exposure to NLEs as faced independently of communities. However, this study supports the idea that some communities experience a disproportionate amount of NLEs. Similarly, a study by King and Ogle (2014) identified that NLEs can occur in socially and spatially variant contexts, especially in areas with

neighborhood disadvantage. Therefore, this finding further emphasizes the importance of location, and incorporating ecological models that help explain the multiple levels of influence on psychological development may help integrate other science-based approaches through an ecological-biological developmental framework (Shonkoff et al., 2012)

Overall, these findings confirm the previous literature, however, they also extend current literature in several aspects. More specifically, demographic factors commonly reported as significant differences between groups such as gender and ethnicity (Ethier et al., 2006; McClure et al., 2010; Santrock, 2014) did not influence reported negative life events, level of self-esteem or internalizing behaviors. Results from the analysis of neighborhood variables found that a majority of the sample resides in areas of concentrated disadvantage (female-headed households, employment rate, below the poverty line), which influenced exposure to negative life events. These findings suggest that early adolescents located in areas of concentrated disadvantage may be at risk for cumulative exposure of NLEs, which could later influence psychopathology. Additionally, among early adolescents that reported lower levels of self-esteem and exposure to negative life events, within the broader contextual neighborhood disadvantage, may be experiencing even more salient and taxing internalizing behaviors.

The current study had several limitations that should be considered. One limitation of the current study was that variables were captured through self-report measures, which introduces shared method variance. Future studies should consider using empirically supported common method variance modeling to help reduce any bias. Additionally, multimethod assessment tools such as physiological measures (i.e., increase in cortisol level) may also help to identify the biopsychosocial impact of NLEs in youth living in socially disorganized areas. The current analysis of negative life events, self-esteem, and internalizing behaviors are cross-

sectional, therefore limited by one time point and limited description of the sequence of events. More specifically, the direction of the relationship cannot be determined. Future studies should examine these relationships over time, particularly focusing on fluctuating levels of self-esteem and long term impact of chronic neighborhood disadvantage on adolescents living in socially disorganized areas. Finally, the study consisted of a majority of female participants, which may have resulted in a lack of gender differences in the overall model.

The present study also had several key strengths. First, the sample was relatively large and diverse, with a majority of adolescents coming from African American and Hispanic backgrounds. Second, the study used confirmatory factor analysis (CFA) to evaluate the measurement properties for a measure that has been primarily normed on Caucasian youth. Similarly, the use of a CFA was used to evaluate the appropriate measurement properties for the parceled model for *Negative Life Events* obtained from the Life Events Checklist, which indicated that the selected indicators for both latent constructs were appropriate for this diverse sample. Third, the study used U.S. census data, which provided detailed information about subgroups that could be used to objectively analyze neighborhood quality. This research is unique in its focus on the distinct contributions of examining unique internal attributes such as self-esteem and the influences of the exposure of NLE on psychological well-being among adolescents from areas of concentrated disadvantage.

These findings also emphasize a need to continue examining the impact of NLEs on adolescents and families living in areas of concentrated disadvantage. The period of adolescence is interspersed with an array of stressors, however, additional risk of exposure to negative life events for adolescents living in socially disorganized areas, may intensify the onset and maintenance of internalizing behaviors. The present study has implications for intervention

at both the individual and school levels. Given that exposure to stressors can account for approximately 30% of adolescent psychopathology (Kessler et al., 2010), it is important from a preventive and policy standpoint to identify mechanisms that can help ameliorate the influence of stressors on psychopathology and reduce the risk of adverse outcomes. Incorporating checklists to identify youth experiencing NLEs in schools in socially disorganized areas may help to develop preventive interventions before onset of internalizing behaviors or to identify the need for mental health services. Furthermore, although self-esteem did not moderate the relationship, future studies could identify potential protective factors that can ameliorate the relationship between NLEs and internalizing behaviors. In addition to highlighting the need for improved psychometric measures of NLEs and self-esteem, the findings of the present study suggest that future researchers will need to examine other aspects of self-concept that may be moderating the effects of exposure to negative life events on psychological well-being.

Although progress has been made in understanding the impact of families living in socially disorganized areas such as increased exposure to negative life events, lack of safety, and limited resources; however, further investigation is needed in understanding long term effects both psychologically and physiologically. The current findings suggest the importance of identifying protective factors that would help reduce the impact of negative life events on internalizing behaviors in youths residing in socially disorganized areas.

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